REMARKS

This paper is being provided in response to the Office Action dated May 25, 2011, for the above-referenced application. In this response, Applicants have amended claims 1, 4, 5, 6, 7 and 11 to clarify that which Applicants consider to be the presently-claimed invention. Applicants respectfully submit that the amendments to the claims are fully supported by the originally-filed specification, consistent with the discussion herein.

The rejection of claims 1-20 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent App. Pub. No. 20062/0103942 to Comeau (hereinafter "Comeau") in view of U.S. Patent App. Pub. No. 2005/0033515 to Bozzone (hereinafter "Bozzone) is hereby traversed and reconsideration is respectfully requested in view of the amendments to the claims contained herein.

Independent claim 1, as amended herein, recites a mobile communication terminal including first memory means and second memory means for storing data. An operating system is arranged to access data stored in said first memory means. An application execution environment that is executed on said operating system and that executes a platform-independent application, said platform-independent application having access to data stored in said second memory means. Detection means detects at least one of: position, direction, attitude and movement of the mobile communication terminal along at least one axis of a coordinate system, the detection means being controlled using the operating system. Memory process means performs a memory process to store detection result data acquired based on detection results by said detection means in said first memory means, wherein the detection result data includes

information concerning changes to the at least one of: position, direction, attitude and movement of the mobile communication terminal along the at least one axis. Data transfer means transfers the detection result data stored in said first memory means to said second memory means, according to a data transfer instruction from said application execution environment, wherein said application execution environment executes said platform-independent application using the detection result data stored in said second memory means. Claims 2-3 and 19-20 depend directly or indirectly from independent claim 1.

Independent claim 4, as amended herein, recites a mobile communication terminal including a first memory and a second memory for storing data. An operating system is arranged to access data stored in said first memory. An application execution environment is executed on said operating system and executes a platform-independent application having access to data stored in said second memory. A 3-axis magnetic sensor and a 2-axis acceleration sensor are used as sensors for detecting at least one of position, direction, attitude and movement of the mobile communication terminal in connection with at least one axis of a coordinate system in accordance with a detection instruction generated by said application execution environment according to a description of said platform-independent application. A memory processor stores detection result data acquired based on detection results by said sensors in said first memory, wherein the detection results include information concerning changes to the at least one of position, direction, attitude and movement of the mobile communication terminal in connection with the at least one axis. A data transfer device transfers the detection result data stored in the first memory to the second memory according to a data transfer instruction from the application execution environment, wherein said application execution environment executes said platform-

independent application using the detection result data stored in said second memory. Claims 9 and 10 depend from independent claim 4.

Independent claim 5, as amended herein, recites a mobile communication terminal including an operating system arranged to access data stored in a first memory. An application execution environment is executed on said operating system and executes a platform-independent application having access to data stored in a second memory. A detection device detects at least one of position, direction, attitude and movement of said mobile communication terminal in connection with at least one axis of a coordinate system, the detection device being controlled using the operating system. A data processor performs a data process of assigning the detection data of said detection device to predetermined arithmetic expression for calculation and storing the calculation result data in said first memory, wherein the detection data includes information concerning changes to the at least one of position, direction, attitude and movement of the mobile communication terminal in connection with the at least one axis. A data transfer device transfers the calculation result data stored in the first memory to the second memory according to a data transfer instruction from the application execution environment, wherein said application execution environment executes the platform-independent application using the calculation result data stored in said second memory. Claims 8-10 depend from independent claim 5.

Independent claim 6, as amended herein, recites a mobile communication terminal including an operating system arranged to access data stored in a first memory. An application execution environment is executed on said operating system and executes a platform-independent application having access to data stored in a second memory. A detection device

detects at least one of position, direction, attitude and movement of said mobile communication terminal in connection with at least one axis of a coordinate system, the detection device being controlled using the operating system. A data processor performs data processes of linking mutually between detection data of said detection means or data calculated from this detection data and other data acquired by means other than said detection means, and storing the linked data in said first memory, wherein the detection data includes information concerning changes to the at least one of position, direction, attitude and movement of the mobile communication terminal in connection with the at least one axis. A data transfer device transfers the linked data stored in the first memory to the second memory according to a data transfer instruction from the application execution environment, wherein said application execution environment executes the platform-independent application using said linked data stored in said second memory. Claims 8-10 depend from independent claim 6.

Independent claim 7, as amended herein, recites a mobile communication terminal including an operating system arranged to use data stored in a first memory. An application execution environment is executed e on said operating system and executes a platform-independent application having access to data stored in a second memory. A detection device detects at least one of position, direction, attitude and movement of said mobile communication terminal in connection with at least one axis of a coordinate system, the detection device being controlled using the operating system. A data processor performs a data process of specifying at least one of: detection data of said detection device or data calculated from the detection data, which meet predetermined conditions, and storing the specified data in said first memory, wherein the detection data includes information concerning changes to the at least one of position, direction, attitude and movement of the mobile communication terminal in connection

with the at least one axis. A data transfer device transfers the specified data stored in the first memory to the second memory according to a data transfer instruction from the application execution environment, wherein said application execution environment executes the platform-independent application using said specified data stored in said memory means. Claims 8-10 depend from independent claim 7.

Independent claim 11, as amended herein, recites a mobile communication terminal including a first memory and a second memory for storing data. An operating system is arranged to access data stored in the first memory. An application execution environment that is executed on the operating system and that executes a platform-independent application, data stored in the second memory. At least one sensor detects at least one of position, direction, attitude and movement of the mobile communication terminal along at least one axis of a coordinate system, the at least one sensor being controlled using the operating system. A memory processor performs a memory process to store, in the first memory, detection result data determined based on detection results by the at least one sensor, wherein the detection result data includes information concerning changes to the at least one of position, direction, attitude and movement of the mobile communication terminal in connection with the at least one axis. A data transfer device transfers the detection result data stored in the first memory to the second memory, according to a data transfer instruction from the application execution environment, wherein the application execution environment executes the platform-independent application using the detection result data stored in the second memory. Claims 12-18 depend directly or indirectly from independent claim 11.

Applicants submit that a problem with prior art systems in the field of the presently-claimed invention is that motion sensing data is stored in a software platform memory that is not readily accessible by platform-independent applications, such as JAVA applications, which are generally only permitted to access memory reserved for the application environment. In the prior art systems, the way to import this data from the platform memory for use in an application running in the environment involves complex pre-processing of the motion data and therefore an increase in the complexity of application development. (See, for example, paragraphs [0005]-[0008] of the originally-filed specification.) The execution of a platform-dependent application depends on a particular platform of a game system or other device.

A platform-independent application is executed by an application execution environment and is, therefore, not dependent on the particular operating system (software platform) of the game system or other device. Applicants refer, for example, to the discussion in the originally-filed specification on page 3, line 24 to page 4, line 24. The application execution environment is executed on the operating system of the mobile communication terminal and executes a platform-independent application having access to a memory of the mobile communication terminal that is different from a memory used by the operating system, wherein said application execution environment executes said platform-independent application using stored detection result data transferred and stored in the memory accessible to the platform-independent application, the detection result data being generated from detected changes in at least one of: position, direction, attitude and movement of the mobile communication terminal.

Applicants respectfully submit that the prior art does not disclose the execution of a platform-independent application using an application execution environment, itself executing on

the operating system of the terminal, and in which the platform-independent application accesses detection result data transferred to the memory accessible to the platform-independent application. In particular, it is submitted that the detection device is detecting the changes in at least one: position, direction, attitude and movement *of the mobile communication terminal.* Applicants have also specifically clarified in the claims that the application execution environment is *executed* on the operating system of the mobile communication terminal, which application execution environment then executes a platform-independent application, the platform-independent application having access to data stored in a second memory, a detection device further being provided for detecting at least one of: position, direction, attitude and movement of the mobile communication terminal along at least one axis of a coordinate system, the detection device being controlled by the operating system. (See, e.g., paragraph [0044] of the originally-filed specification.)

The Office Action (page 4) states that Comeau does not disclose a detection means configured to detect position, direction, attitude and movement of the mobile communication terminal, nor the storing of detection result data. Moreover, the Office Action specifically notes that "Comeau teaches that the application program my utilize *data received from a peripheral or device...*" (emphasis added). The Office Action then cites to Bozzone as disclosing a wireless personal tracking and navigation system with a wireless device and a peripheral pedometer device coupled to the wireless communication device.

It is explicitly described in Bozzone that a pedometer is coupled to and located separately from the wireless communication device and sends data to the wireless communication device via a wired or wireless link. As recognized in the Office Action, Bozzone's pedometer is a

peripheral device that is detecting the changes in position of the peripheral pedometer device, not of the wireless communication device to which the accelerometer data is being sent. Furthermore, it is clear that the operating system of the wireless communication terminal in Bozzone is not being used to control the accelerometers of the pedometer; rather the pedometer and is a separate unit containing the accelerometers and runs its own applications for obtaining accelerometer data.

As noted above (and recognized in the Office Action (page 4)), Comeau explicitly provides for the use of a peripheral device to be connected to the wireless communication unit, and Bozzone explicitly discloses the coupling of a peripheral pedometer device. Thus, the combination of Bozzone and Comeau, according to the teachings of both of these references, would explicitly teach one of ordinary skill art to provide accelerometer data from a separate peripheral unit coupled to a wireless communication terminal. There is no teaching or instruction in these references that would lead one of ordinary skill in the art to be taught the use of a detection means/device for detecting at least one of: position, direction, attitude and movement *of the mobile communication terminal* along at least one axis of a coordinate system, the detection means being controlled by the operating system, and in which an application execution environment that is executed on said operating system and that executes a platform-independent application, said platform-independent application having access to data stored in said second memory, as is recited by Applicants. That is, nothing about these references discloses the detection of a position, direction, attitude and/or movement of the mobile communication terminal itself on which an operating system is executing, that executes an application execution environment, that in turn executes a platform-independent application, and that controls the obtaining of detection result data in a manner like that recited by Applicants.

In distinct contrast to the disclosures of Comeau and Bozzone (or the combination thereof), Applicants' recited system enables the mobile communication terminal itself to be utilized, for example, as a mouse, as a pedometer, as an alarm clock (that responds to motion, such an impact, to shut it off), etc.. Such a device, as recited by Applicants, is not taught by the proposed combination of Comeau and Bozzone that instead, as noted above, explicitly provides for the coupling of a separate peripheral unit, such a pedometer, to a wireless communication terminal, without offering any of the advantages of a system like that recited by Applicant concerning the use of the mobile communication terminal itself to function, in the manner recited by Applicants, based on movement thereof in connection with operation of a platform-independent application thereon. Indeed, Applicants have specifically sought to avoid the disadvantages of a system in which a peripheral unit (like a peripheral, removable mouse, see, e.g., page 26, lines 18-21 of the originally-filed specification) for detecting movement only must be peripherally attached. As discussed, Applicants specifically recite that an application execution environment that is executed on said operating system and that executes a platform-independent application, said platform-independent application having access to data stored in a second memory, and a detection device for detecting at least one of: position, direction, attitude and movement of the mobile communication terminal along at least one axis of a coordinate system, the detection device being controlled using the operating system, the detection result data being transferred from a first memory to a second memory of the mobile communication terminal to then be accessed by the platform-independent application.

Accordingly, Applicants respectfully submit that the addition of Bozzone does not overcome the deficiencies of Comeau with respect to Applicants' present claims. In view of the above, Applicants respectfully request that the rejection be reconsidered and withdrawn.

Based on the above, Applicants respectfully request that the Examiner reconsider and withdraw all outstanding rejections and objections. Favorable consideration and allowance are earnestly solicited. Should there be any questions after reviewing this paper, the Examiner is invited to contact the undersigned at 508-898-8603.

Respectfully submitted,
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